

AMENDMENTS TO THE CLAIMS

1. (CURRENTLY AMENDED) A method for representing a motion for two blocks, comprising the steps of:

(A) exchanging a particular value of a plurality of values with a memory, each of said values defining which of said two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types, wherein said prediction types include (i) a first prediction type for a first reference picture list and (ii) a second prediction type for a second reference picture list and said exchanging includes at least one of reading from said memory and writing to said memory; and

(B) representing said motion for said two blocks with a group comprising said particular value and up to all of said motion vectors, wherein said two blocks use a macroblock adaptive field/frame coding.

2. (ORIGINAL) The method according to claim 1, wherein said group comprises a plurality of bits that is less than a maximum number of bits capable of representing each unique possibility for said motion vectors.

3. (ORIGINAL) The method according to claim 1, wherein a first plurality of said motion vectors for a first of said two

blocks are equal to a second plurality of said motion vectors for a second of said two blocks.

4. (PREVIOUSLY PRESENTED) The method according to claim 3, further comprising the step of:

excluding said second plurality of said motion vectors from said group.

5. (ORIGINAL) The method according to claim 1, wherein said group includes at most two of said motion vectors.

6. (ORIGINAL) The method according to claim 5, wherein said particular value defines how many of said motion vectors are used by at least one of said two blocks.

7. (ORIGINAL) The method according to claim 1, wherein one of said values defines using none of said motion vectors.

8. (PREVIOUSLY PRESENTED) The method according to claim 1, further comprising the step of:

using a list 0 prediction of said prediction types for said motion vectors, wherein each of said motion vectors is used for a different one of said two blocks.

9. (PREVIOUSLY PRESENTED) The method according to claim 1, further comprising the step of:

using a list 1 prediction of said prediction types for said motion vectors, wherein each of said motion vectors is used for a different one of said two blocks.

10. (ORIGINAL) The method according to claim 1, further comprising the step of:

using a bidirectional prediction of said prediction types for said motion vectors, wherein each of said motion vectors is used for both of said two blocks.

11. (ORIGINAL) The method according to claim 1, wherein step (B) comprises the sub-steps of:

generating said group with said particular value while above a predetermined standard level for a bitstream; and

generating said groups without said particular value while below said predetermined standard level for said bitstream.

12. (ORIGINAL) The method according to claim 1, further comprising the steps of:

interpreting said motion vectors in said group based upon said particular value while above a predetermined standard level for a bitstream; and

using said motion vectors in said group independently of said particular value while below said predetermined standard level for said bitstream.

13. (CURRENTLY AMENDED) An apparatus comprising:

a memory; and

a circuit configured to (i) exchange a particular value of a plurality of values with said memory, each of said values defining which of two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types and (ii) represent a motion for said two blocks with a group comprising said particular value and up to all of said motion vectors, wherein said prediction types include (a) a first prediction type for a first reference picture list and (b) a second prediction type for a second reference picture list and said exchange includes at least one of a read from said memory and a write to said memory, wherein said two blocks use a macroblock adaptive field/frame coding.

14. (ORIGINAL) The apparatus according to claim 13, wherein said group comprises a plurality of bits that is less than a maximum number of bits representing every unique possibility for said motion vectors.

15. (ORIGINAL) The apparatus according to claim 13, wherein said group includes at most two of said motion vectors.

16. (ORIGINAL) The apparatus according to claim 15, wherein said particular value defines how many of said motion vectors are used by at least one of said two blocks.

17. (ORIGINAL) The apparatus according to claim 13, further comprising:

a coding circuit configured to encode said particular value within a bitstream.

18. (ORIGINAL) The apparatus according to claim 13, further comprising:

a decoder circuit configured to decode said particular value from a bitstream.

19. (PREVIOUSLY PRESENTED) The apparatus according to claim 13, wherein:

a first of said values defines using none of said motion vectors;

5 a second of said values defines said first prediction type;

a third of said values defines said second prediction type; and

10 a fourth of said values defines a bidirectional prediction of said prediction types.

20. (PREVIOUSLY PRESENTED) An apparatus comprising:

means for storing a group; and

5 means for (i) exchanging a particular value of a plurality of values with said means for storing, each of said values defining which of two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types and (ii) representing a motion for said two blocks with a group comprising said particular value and up to all of said motion vectors, wherein said prediction types include (a) a first
10 prediction type for a first reference picture list and (b) a second prediction type for a second reference picture list and said exchanging includes at least one of reading from said means for storing and writing to said means for storing.

21. (CURRENTLY AMENDED) A method for representing a motion for two blocks, comprising the steps of:

(A) generating a representation for said motion for said two blocks, said representation having less than a maximum number

5 of bits capable of representing each possible combination of four motion vectors for said two blocks; and

(B) exchanging said representation with a memory, wherein (i) said exchanging includes at least one of reading from said memory and writing to said memory and (ii) said two blocks use
10 a macroblock adaptive field/frame coding.

22. (ORIGINAL) The method according to claim 21, wherein said representation comprises a binary representation.

23. (ORIGINAL) The method according to claim 21, wherein said representation is configured to accommodate (i) a first number of possible vectors for a first of said motion vectors for a first block of said two blocks, (ii) a second number of possible vectors
5 for a second of said motion vectors for said first block, (iii) a third number of possible vectors for a third of said motion vectors for a second block of said two blocks and (iv) a fourth number of possible vectors for a fourth of said motion vectors for said second block.

24. (ORIGINAL) The method according to claim 23, wherein said presentation is less than a base 2 logarithm of a product of said first number, said second number, said third number and said fourth number rounded up to a nearest integer.

25. (ORIGINAL) The method according to claim 21, wherein said representation is capable of representing up to two motion vectors for each of said two blocks, each of said two motion vectors for each of said two blocks can take on at least 67,108,864 unique values, and said representation uses fewer than 104 bits.